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Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, based on Master Format 2004 and The Project Resource Manual—CSI Manual of Practice. The Manufacturer is responsible for technical accuracy. By removing the references to specific Sanyo product names or part numbers, the text may be used also in performance-based specifications.

The section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project and local building code. Words and sentences within brackets [ ] are choices to include or exclude a particular item or statement. Coordinate this section with other specification sections and the Drawings.

SECTION 28 23 29
VIDEO SURVEILLANCE REMOTE DEVICES AND SENSORS
Sanyo VCC-HD2100 4 MEGAPIXEL COLOR CS BOX CAMERA

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes

1. Video Surveillance Remote Devices

B. Related Sections

1. Section 28 23 13 – Video Surveillance Control and Management Systems
2. Section 28 23 16 – Video Surveillance Monitoring and Supervisory Interfaces
3. Section 28 23 19 – Digital Video Recorders and Analog Recording Devices
4. Section 28 23 23 – Video Surveillance Systems Infrastructure

1.2 REFERENCES

A. Federal Communications Commission (FCC) (www.fcc.gov)

1. FCC CFR 47 part 15 Class B – Telecommunications – Radio Frequency Devices – Digital Emission

B. International Electrotechnical Commission (IEC)

1. IEC 60529 Degrees of Protection provided by enclosures (IP Code)

C. Institute of Electrical and Electronics Engineers, Inc. (IEEE) (www.ieee.org)
   1. IEEE 802.3af Power Over Ethernet
D. International Organization of Standardization (ISO)
   1. 9001 – Quality System
E. Underwriters Laboratories, Inc. (UL) (www.ul.com)
   1. UL 2044 Commercial Closed-Circuit Television Equipment

1.3 SYSTEM DESCRIPTION

A. Video Surveillance Remote Devices
   1. 4 Megapixel 1080p Full High Definition Color Network CMOS Camera.
B. Performance Requirements
   1. Provide surveillance with high definition detail images
   2. Possesses advanced intelligence features.
   3. The camera shall be of manufacturer's official product line, designed for commercial/industrial continuous 24/7 use.
   4. The camera shall be based upon standard components and proven technology.

1.4 SUBMITTALS

A. Submit under provisions of Section [01 33 00.]
B. Product Data:
   1. Manufacturer's data, user and installation manuals for all equipment and software programs including computer equipment and other equipment required for complete video system.
C. Shop Drawings; include
   1. System device locations on architectural floor plans.
   2. Full Schematic of system, including wiring information for all devices.
D. Closeout Submittals
   1. User manual.
   2. Parts list.
   3. System device locations on architectural floor plans.
   4. Wiring and connection diagram.
   5. Maintenance requirements.

1.5 QUALITY ASSURANCE

A. Manufacturer:
   1. Minimum of 10 years experience in manufacture and design Video Surveillance Devices.
   2. Manufacturer's quality system: Registered to ISO 9001 Quality Standard.
B. Video Surveillance System
C. Installer:
   1. Minimum of 5 years experience installing Video Surveillance System.
   2. All camera installation, configuration, setup, program and related work shall be performed by electronic technicians thoroughly

trained by the manufacturer in the installation and service of the equipment provided.

1.6 DELIVERY, STORAGE AND HANDLING

A. Comply with requirements of Section [01 60 00]

B. Deliver materials in manufacturer's original, unopened, undamaged containers; and unharmed original identification labels.

C. Protect stored materials from environmental and temperature conditions following manufacturer's instructions.

D. Handle and operate products and systems according to manufacturer's instructions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer

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B. Substitutions: Under provisions of Division 1

1. All proposed substitutions must be approved by the Consultant, or Architect/Engineer professional.
2. Proposed substitutions must provide a line-by-line compliance documentation.

2.2 4 Megapixel 1080p Full High Definition Color Network CMOS Camera

A. General Characteristics:

1. Be designed to provide advanced image support resolutions up to 4 Megapixels of effective picture elements 2288(H) x 1712(V).
2. Provide dual Codec for simultaneous H.264 and JPEG transmission.
3. Be designed to provide 1080p H.264 compressed video at 30 frames per second.
4. Use a high quality 1/3" CMOS progressive scan image sensor
5. Support ~~C/~~CS Mount Lenses with Manual or DC-Auto Iris connection
6. Provide color pictures in light down to 1.0 lux at F 1.2
7. Be capable of accepting power from 12V DC, 24V AC or IEEE 802.3af Power-over-Ethernet (PoE)
8. Be capable of transmitting analog NTSC video for setup and installation purposes

B. Camera shall be capable of the following adjustments and features:

1. The camera will provide a sixteen (16) character camera ID.
2. Provide selection of languages from English, French, German, Japanese and Spanish.
3. Progressive Scan CMOS technology for image clarity.

4. Four (4) Megapixels maximum resolution
5. Three levels of operator privileges shall be available.
    a. Admin level shall have full access to all functions.
    b. Operator level shall have access to all functions except configuration settings.
    c. Guest will be restricted to monitoring live video only.
6. Automatic mechanical back-focus via manual and one-touch controls locally to the camera or remotely via the web.
7. Camera shall have advanced programmable motion detection. Selectable modes include
    a. Motion Detection
    b. Motion Masking
    c. Off.
8. The camera shall support Back Light Compensation (BLC) circuitry
9. When image data is output on a conventional SD output, the camera shall eliminate “smearing” associated caused by vertical noise associated with bright spots (such as headlights).

C. Video Requirements and Adjustments:
    1. Minimum Adjustments and Requirements
        a. Imager: Progressive Scan 1/3” inch CMOS.
        b. Pixels: 2288(H) x 1712(V) effective picture elements.
        c. Image Size: H.264 – 16:9 HD: 1920 x 1080, 30 ips. HD: 1280 x 720 30 ips; 640 x 360 30 ips; 320 x 180 30 ips. H.264 4:3: 1600x1200 30 ips; 1280 x 960 30 ips; 1024 x 768 30 ips; 640x480 30 ips; 320 x 240 30 ips.
        d. Image Size: MJPEG 16:9 HD: 1920 x 1080; HD 1280 x 720; 1024 x 576; 640 x 360. JPEG 4:3 4M: 2288 x 1712, 2M: 1600 x 1200, 1280 x 960; 1024 x 768; 800 x 600; 640 x 480; 320 x 240.
        e. Iris Control: DC iris lens supported.
        f. Shutter: Electronic range of 1/30, 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000. Long shutter: x1, x2, x4, x8, x16, x32.
        g. Aperture Compensation: Selectable On/Off.
        h. Minimum Color Illumination: 1.0 lux at F 1.2
        i. Signal to Noise Ratio: more than 50 dB (AGC off).
        j. The camera shall provide selectable White Balance settings include Auto-tracing White (ATW), AWC for technical support adjustments; Outdoor, Indoor, Fluorescent and Manual control (MWB). MWB allows individual red and blue adjustments.
        k. The camera shall support Backlight Compensation: Selectable Multi-spot metering, Center-zone metering, Face and Off. Mask settings available.
        l. Electronic iris: Selectable On/Off.

m. AGC Gain: Selectable Normal/Middle/High/Off. Adjustable gain control in Off mode.
n. Gamma: 0.45/1, other settings available.
o. Electronic Sensitivity Boost: Selectable Auto/Off. Max. 32x.

D. Operating Environment:
1. PC: IBM PC/AT or compatible.
2. Operating System: Windows XP Professional SP2 or Windows Vista
3. CPU: Core2Duo E6700 2.66 GHz or higher.
4. Memory: Windows XP: 1 GB or more. Windows Vista: 2 GB or higher.
5. Network Interface: 10/100Base-TX (RJ-45 connector).
6. Display Card: 1920 x 1200 pixels or higher.
7. Graphics Chip: ATI Radeon HD2600 series or higher; nVidia GeForce 8600 series or higher; nVidia Quadro FX550 series or higher.
8. Web Browser: Internet Explorer Ver 6.0 SP2 or higher, or Ver 7.0

E. IP Interfaces:
1. Protocols supported include TCP/IP, HTTP, HTTPS, UDP, SMTP, FTP, DHCP, DDNS, NTP, RTP, RTSP.
2. Camera IP interface at 10 Base-T/100 Base-TX/PoE compatible.
3. The camera shall interface to Microsoft Internet Explorer ver. 6.0 SP2 or higher, or ver. 7.0 via Plug-in module software making video images and configuration menus available.
4. When accessed from a browser on-line, context sensitive help shall be provided.
5. The camera shall provide an integral E-mail function for up to five (5) E-mail addresses. E-mails can be automatically sent as an alarm notification or at regular intervals. An image can be attached to the e-mail in either case.
6. Web access protected by user ID and password.
7. Camera shall maintain a transactional log when accessed via the network containing the most recent 100 times and IP addresses of those given access.
8. Camera shall maintain an “Up Log” showing power on time
9. Up to 20~~0~~ users may access a camera via the web server simultaneously.
10. Two alarm inputs (NO/NC) shall be provided.
11. Two alarm output (NO/NC) shall be provided.
12. The camera shall support both fixed IP addresses and dynamically assigned IP addresses provided by a Dynamic Host Control Protocol (DHCP) server.
13. The camera shall be able to interface with SANYO Video Pilot software. Video Pilot shall support full functionality when operating on Windows Vista or Windows XP Professional Edition with SP2/SP3.

14. Third party application integration of the camera is supported via two (2) Development Kits which provide the necessary information for interfacing. Contact SANYO for details.
15. Image quality selectable at Basic, Normal, Enhanced (default), Fine and Super Fine.
16. Resolutions may be set for Live=modes.

F. Electrical:
   1. Camera input voltage/power requirements: 24V AC, 60Hz, 12-15V DC, IEEE 802.3af PoE
   2. Power Consumption: 4.6w

G. Mechanical:
   1. Weight: 7.76 oz. (220g).
   2. Dimensions: 72.4 W x 44.8 H x 75.2 D mm (2.85” W x 1.76” H x 2.96” D)

H. Environmental:
   1. Operating Temperature: 14°F to 122°F (-10° to +50°C) within 90% relative humidity.
   2. Storage Temperature: -4°F to 158°F (-20°C to +70°C) within 70% maximum relative humidity.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive devices and notify adverse conditions affecting installation or subsequent operation.
B. Do not begin installation until unacceptable conditions are corrected.

3.2 PREPARATION

A. Protect devices from damage during construction.

3.3 INSTALLATION

A. Install devices in accordance with manufacturer’s instruction at locations indicated on the floor drawings plans.
B. Perform installation with qualified service personnel.
C. Install devices in accordance with the National Electrical Code or applicable local codes.
D. Ensure selected location is secure and offers protection from accidental damage.
E. Location must provide reasonable temperature and humidity conditions, free from sources of electrical and electromagnetic interference.

3.4 FIELD QUALITY CONTROL

A. Test snugness of mounting screws of all installed equipment.
B. Test proper operation of all video system devices.
C. Determine and report all problems to the manufacturer’s customer service department.

3.5 ADJUSTING

A. Make proper adjustment to video system devices for correct operation in accordance with manufacturer’s instructions.

B. Make any adjustment of camera settings to comply with specific customer's need.

3.6 DEMONSTRATION

A. Demonstrate at final inspection that video management system used with devices functions properly.

END OF SECTION